MG-857 d

Manitoba
Industry, Trade
and Tourism

SITE LOCATION REPORT 1991

INDUSTRY & TRADE DIVISION
DEPT. OF INDUSTRY, TRADE & TOURISM
410 - 155 CARLTON STREET
WINNIPEG, MANITOBA R3C 3H8
CANADA
TELEPHONE: (204) 945-2456
FAX: (204) 957-1793

92-05211/

TABLE OF CONTENTS

INTRODUCTION 4

A GENERAL OVERVIEW 6
- Summary of Economic Indicators 7

PRODUCTION COSTS
- Comparative Monthly Industrial Electric Bills 9
- Water Rates 10
- Natural Gas Rates 11
- Real Estate Market Characteristics 12
- Winnipeg Industrial Zones 12
- Industrial Sq. Footage Cost By Price Range 12
- Office Space & Land Costs, Selected Major Cities 13
- Consumer Price Index 13
- Winnipeg Fully Serviced Industrial Parks & Areas 14
- Rural Manitoba Industrial Parks 15
- Unemployment Rate By Province & Canada 17
- General Adult Minimum Wage Rates in Canada 18
- Differential Minimum Wage Rates 19
- Employment By Industry 20

CULTURE, RECREATION AND QUALITY OF LIFE
- Average Residential Housing Prices 23
- Cost of Owning a House in Selected Major Cities 24
- Vacancy Rates in Apartment Structures 25
- Child Care 26
- Cultural Activities in Manitoba 27
- Winnipeg's Sports Facilities 29
- Provincial and National Parks 31
- Regional Parks 31

LABOUR
- Manitobans Employed By Occupation 33
- Competitive Wage Rates 34
- Labour Force Stability 35
- Availability of Manpower 36

EDUCATION AND TRAINING SUPPORT

Educational Institutions 38
University of Manitoba 38
Red River Community College 39
University of Winnipeg 40
South Winnipeg Technical Centre (SWTC) 40
Training Assistance 41
Skill Investment 41
Retaining Option 41
Training Trust Funds 41
Language at Work 41
Skill Shortages Program 42
Work Place Based Training 42

RESEARCH AND DEVELOPMENT INFRASTRUCTURE

Manitoba Research Council 44
University of Manitoba 46
Canadian Institute of Industrial Technology 47
AECL Research - Whiteshell Laboratories 48
Federal Assistance for Research & Development 49
Economic Development Programs 51
Industrial Infrastructure Support 54
Aerospace 54
Electronics 54
Metal Fabrication 54
Potential Manitoba Suppliers 54

TRANSPORTATION

Rail 56
Time In Transit From Winnipeg 57
Motor Carriers 58
Shipping Distances 59
Air Transportation 60
Scheduled Passenger Flights 61

GOVERNMENT REGULATIONS

Labour Legislation 64
Environment 65
Manitoba's Workplace Safety and Health Act 66
Taxation 68
Inter - Provincial Comparison of Major Levies 70
Workers Compensation 71
Canada Pension Plan 71
Unemployment Insurance 71
Business Regulations and Taxes - City of Winnipeg 72
Intercity Comparison of Annual Personal Costs and Taxes 73

INTRODUCTION

INTRODUCTION

Manitoba welcomes the opportunity to present a proposal to assist your company in examining this province as a potential location. Upon investigation, you will find Manitoba is a very cost-effective and progressive place from which to transact your business.

The Government of Manitoba has made economic development a top priority. From the Premier, Gary Filmon, to the Industry, Trade & Tourism officer who works with you, we offer the many advantages that you will find locating in Manitoba which include:

1. **A skilled and stable workforce that truly has a proud work ethic.**
2. **Manitoba's transportation system is sophisticated and efficient.**
3. **Manitoba offers a low cost environment to conduct business:**
   a) **The lowest published electrical energy rates in North America.**
   b) **Natural gas rates are very competitive.**
   c) **Our industrial wage rates are the most competitive in Canada.**
   d) **The cost of good industrial land is relatively inexpensive in Winnipeg.**
   e) **Shipping rates in and out of Winnipeg are extremely competitive.**
4. **Manitoba's diversified economy and and well established manufacturing and services base ensures broad availability of support services.**
5. **A Winnipeg location will allow employees to enjoy an excellent quality of life.**
6. **The government of Manitoba recognizes the importance of business.**

Let's talk business.

A GENERAL OVERVIEW

A GENERAL OVERVIEW

The Province of Manitoba is located in the geographical heartland of North America. Its 650,000 square kilometres (251,000 square miles) is roughly 2 1/2 times the size of the United Kingdom and five times larger than the State of New York. It extends l,225 km (765 miles) north to south where we border the U.S. Midwest at Minnesota and North Dakota. It has 655 km (409 miles) of coastline on Hudson Bay.

The diversified nature of the Manitoba economy - a traditionally stable mixture of service industries, agriculture, manufacturing, mining and forestry - has lent an important measure of stability to overall economic performance.

Manitoba's one million plus people have been nurtured in a pioneer tradition of accepting challenge and succeeding. The stable, well-trained workforce of 542,000 has traditionally enjoyed the best labour relations in the country.

Predictions for continued growth and expansion of the provincial economy are bolstered by a number of key initiatives:

- Construction of the Conawapa Generating Station and the Bipole 3 Transmission Complex for a new supply of electricity to meet the forecast demand in Manitoba and a power sale to Ontario. The latest estimate by Manitoba Hydro put the cost of Conawapa at approximately $4 billion and the estimated cost of Bipole 3 at $1.7 billion.

- Formation of a new Economic Development Board chaired by the Premier which will be a powerful new cabinet committee designed to be a nerve centre for the government's strategy. The Board mandate is to collect ideas for economic development projects from within government and also to be more responsive to ideas from private business.

- Formation of the Economic Innovation and Technology Council which is an important new forum for government and business to work jointly on research and development programs

The objective of the Government of Manitoba is to seek stable, steady growth. The Government is committed to working with all sectors of the economy - business, industry, labour - to expand opportunities and to develop the province's long-term potential.

One of Canada's largest banks stated in its economic outlook; "We expect Manitoba to lead the nation in terms of real growth during the decade to 1994."

SUMMARY OF ECONOMIC INDICATORS

	1988	1989	1990
	(Millions of Dollars Except as noted)		
Gross Domestic Product	21,652	23,588	24,278
Employed (thousands)	494.0	498.0	505
Unemployment (%)	7.8	7.5	7.2
Manufacturing Shipments	6,772.0	7,294.0	7,164.9
Capital Investment	3781.9	3,751.4	3,903.5
Building Permits	789.2	836.9	731.5
Housing Starts	5,455	4,084	3,297
Retail Trade	6,070.6	6,321.8	6,319.4
Farm Cash Receipts	2,057.6	2,102.2	2.027.5
Consumer Price Index	108.5	113.7	118.9
Average Weekly Wages/Salaries	421.93	445.06	462.74

Source: Manitoba Bureau of Statistics: May 9, 1991

Manitoba's economy has continued a pattern of stable, consistent growth. It has not been subject to the great swings in economic activity which characterize the "boom and bust" cycles of other jurisdictions.

The Service Sector is the largest in the provincial economy, accounting for more than 72.6 percent of the real Gross Domestic Product and more than 74.3 percent of employment.

The Secondary Sector, which includes utilities, manufacturing and construction, accounts for 18 percent of Gross Domestic Product (GDP) and 16 percent of total employment.

Agriculture, mining, forestry, fishing and trapping combine to form the Primary Sector, which accounts for 9.1 percent of GDP and 9.3 percent of employment.

This stable, diversified economy has protected Manitoba from the economic downturn of the earlier part of the decade and has allowed the province to move forward in expanding and strengthening its economic foundation.

Manitoba's Population

Manitoba has a population of 1,091,600 (1990). Winnipeg, Manitoba's capital city, has a population of 631,000. Ethnic origins from the 1986 census include the following major groups:.

English	158,190	Irish	24,235
German	96,165	Dutch	27,875
Ukrainian	79,940	Danish	1,395
Icelandic	6,980	Norwegian	2,515
Swedish	3,335	French	55,605
Polish	22,015	Scottish	40,825
Jewish	13,875		
Status Indians	40,965		

PRODUCTION COSTS

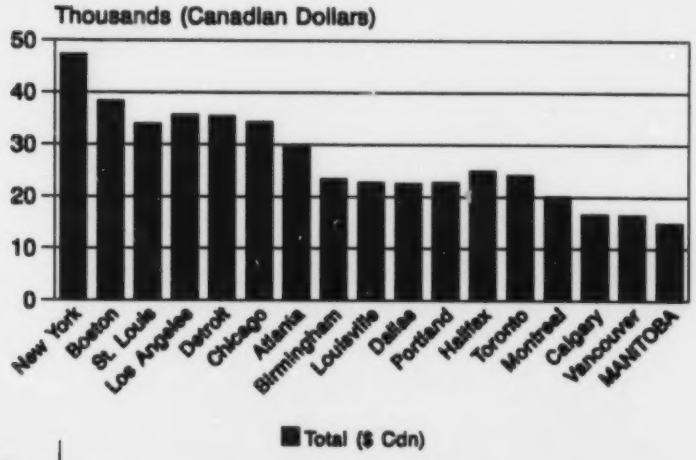
COMPARATIVE MONTHLY INDUSTRIAL ELECTRIC BILLS
1,000 KW DEMAND
400,000 KILOWATT - HOURS
November 1, 1990

New York	$47,400*
Chicago	$34,300*
Boston	$38,300*
St. Louis	$34,000*
Detroit	$35,500*
Los Angeles	$35,700*
Atlanta	$29,600*
Portland	$20,700*
Birmingham	$23,400*
Dallas	$22,500*
Louisville	$22,700*
Halifax	$25,021
Toronto	$24,161
Montreal	$20,019
Calgary	$16,643
Vancouver	$16,563
WINNIPEG	**$14,984**

Note: All amounts are in Canadian dollars

Source: Manitoba Hydro Rates Department
* Ontario Hydro Rates Department

Comparative Monthly Industrial Electrical Bills
1,000 KW Demand (400,000 Kilowatt Hours)



Source:
Canadian Data - Manitoba Hydro Rates Dept.
U.S. Data - Ontario Hydro Rates Dept.

WATER RATES

The City of Winnipeg sets water and sewage rates and limits on sewage industrial waste. Water and sewer service user charges in the City of Winnipeg are summarized:

	Water Rate per 100 cubic feet	Sewer Service per 100 cubic feet
First 9,600 cubic feet/3 months	$1.24	$1.49
9,600-96,000 cubic feet/3 months	$.96	$1.49
Over 96,000 cubic feet/3 months	$.66	$1.49

In addition, a quarterly charge based on meter size is charged over and above consumption charge:

Meter Size	Quarterly Charge (90 days)
5/8"	$ 10.71
3/4"	11.54
1"	14.01
1 1/2"	17.31
2"	26.39
3"	93.21
4"	117.96
6"	175.71
8"	241.71

NATURAL GAS RATES

CENTRA GAS MANITOBA INC.

Competitively priced natural gas service is available in various centers in Manitoba. Rates for specific areas are available on request. The following gives an example of pricing.

Firm Sales Service Rate Schedule
(Interim Rates)

Territory: Entire natural gas franchise area of the Company.

Availability: For gas supplied through one meter to residential, commercial and small industrial customers.

	RATES AS OF MARCH, 1991	
Small General Service		
Fixed Monthly Charge		
Brandon Division*	$ 9.00	
All Other Areas	10.00	
Commodity Charge/m3	0.1645	
Large General Service		**Interruptible**
Fixed Monthly Charge	$45.00	0.00
Commodity Charge/m3		
Class 4 - 0-680,000 m3 Annually	0.1289	0.1118
Class 3 - 680,000-1,700,000 m3 Annually	0.1269	0.1098
Class 2 - 1,700,000-3,400,000 m3 Annually	0.1259	0.1088
Class 1 - Over 2,400,000 m3 Annually	0.1254	0.1083

m3: One Cubic Metre
*Brandon Division includes: Brandon, R.M. of Cornwallis, R.M. of Elton (Forrest), R.M. of Odanah, CFB Shilo

INDUSTRIAL REAL ESTATE MARKET CHARACTERISTICS
WINNIPEG

	1990	1991
RENTS	$3.50 - $5,25/SQ. FT. NET	STABLE
AVAILABLE SPACE	3 MILLION SQ. FT.	STABLE
ABSORPTION RATE	I MILLION SQ.FT./ANNUM	STABLE

WINNIPEG INDUSTRIAL ZONES

	PRICE/ACRE
SOUTH WEST	$65,000 - 85,000
NORTH WEST	$65,000 - 250,000
SOUTH EAST	$45,000 - 55,000
NORTH EAST	$50,000 - 55,000

INDUSTRIAL SQ. FOOTAGE COST BY PRICE RANGE 1990

MONTREAL	$ 4.00 - 6.25
OTTAWA	$ 5.00 - 6.50
TORONTO	$ 4.00 - 5.00
WINNIPEG	**$ 3.50 - 5.25**
REGINA	$ 4.00
CALGARY	$ 4.00 - 4.50
EDMONTON	$ 3.50 - 4.25
VANCOUVER	$ 4.00 - 10.00

Source: Royal LePage Market Survey

A List of Industrial Parks and Areas in Winnipeg and Rural Manitoba are also provided in this section of the report.

OFFICE SPACE AND LAND COSTS, SELECTED MAJOR CITIES, 1990

	Downtown Office Rents ($ per Square Foot)	Serviced Industrial Land Costs ($'000 per Acre)
Montreal	30.00 - 34.00	21 - 654
Ottawa-Carleton	24.00 - 27.00	90 - 250
Toronto	36.00 - 47.00	250 - 1,000
Winnipeg	**15.00 - 17.00**	**52 - 150**
Regina	15.50	25 - 150
Calgary	10.00 - 19.00	75 - 220
Edmonton	12.00 - 18.00	30 - 125
Vancouver	17.00 - 32.00	125 - 1,200

Source Royal LePage Market Report, 1991

- Winnipeg is a relatively inexpensive place to live and do business. Office and industrial land costs in Winnipeg are considerably lower than in most major Canadian cities.

- Even at the low end of the market, downtown office space in Toronto is 2.4 times more expensive than in Winnipeg, and serviced industrial land is 4.5 times more expensive.

- Electricity for industrial use is also economical. In 1990, 400,000 kwh of electricity cost $15,000 in Winnipeg, which is almost the lowest rate on the continent. The same amount of electricity cost $16,000 in Calgary; $16,800 in Vancouver; $20,700 in Montreal; $22,000 in Toronto; $22,500 in Dallas, Texas; $29,600 in Atlanta, Georgia; and $34,300 in Chicago.

Source: The 1991 Manitoba Budget - The Economy

CONSUMER PRICE INDEX
Winnipeg and Canada (1986 = 100)

	WINNIPEG	CANADA
1980	68.7	67.2
1981	76.4	75.5
1982	83.1	83.7
1983	88.7	88.5
1984	91.9	92.4
1985	95.7	96.0
1986	100.0	100.0
1987	104.2	104.4
1988	108.5	108.6
1989	113.7	114.0
1990	118.9	119.5

Source: Statistics Canada

WINNIPEG
FULLY SERVICED INDUSTRIAL PARKS AND AREAS

NO.	INDUSTRIAL PARK	PARK OWNER & ZONING	TOTAL AREA (ACRES)	AVAILABLE AREA (ACRES)	SELLING PRICE $/ACRE	IMPROVEMENT COST
1.	Pandora Industrial Park	CN Rail Zoned - M2 - M3	130	119	For Lease	None
2.	Dugald Industrial Park	CN Rail Zoned - M2 - M3	65	30	For Lease	None
3.	St. Boniface Industrial Park	City of Winnipeg Zoned - MP-2 - MP-3	700	200	$52,000 - $56,000 Non-track, trackage	None
4.	Winnipeg Industrial Park	Jegarry Development Ltd. Zoned - M2 - M3	22	18	$55,000 - $190,000	None
5.	Winfield Business Park	Winfield Developments Ltd. Zoned M1	27	15	$75,000 - 100,000	None
6.	West Fort Garry Industrial Park	Cairns Developments Ltd. Zoned M1 - M2	200	30	$90,000	None
7.	Kenaston Industrial Park	John A. Flanders Ltd. Zoned - M3	100	42	$55,000 - $65,000	None
8.	West Logan Industrial Park	Winfield Developments Ltd. Zoned - M2	119	(Serviced) 30 (Not Serviced) 10	$90,000 - $120,000	None Yes
9.	Inkster Park South	Dominion Construction Co. Ltd. Zoned - M2A	5 (2 sites)	5	$105,000 - $120,000 (per site)	None
10.	Birds Hill Industrial Park	Willart Holdings Ltd. Zoned - M2	76	42	$3,500 - $12,800 (no water & sewer)	None
11.	W.I.T. Industrial Park	CN Rail Zoned - M2 - M3	100	100	For Lease	Yes

All parks are serviced with electricity, natural gas, storm & sanitary sewer, water and paved roads unless noted otherwise.

Zoning: M1, MP1 - Light Industrial
M2, MP2 - Light Industrial
M3, MP3 - Heavy Industrial

SELKIRK

NO.	INDUSTRIAL PARK	PARK OWNER & ZONING	TOTAL AREA (ACRES)	AVAILABLE AREA (ACRES)	SELLING PRICE $/ACRE	IMPROVEMENT COST
1.	Selkirk/St. Andrews Economic Development Zoned M3	c/o Triple S	250	220	Negotiable	None

Contact: Mr. Greg Michie
Triple S Economic Development
200 Eaton Avenue
Selkirk, Manitoba R1A OW6
Telephone: 482-4775

BRANDON

NO.	INDUSTRIAL PARK	PARK OWNER & ZONING	TOTAL AREA (ACRES)	AVAILABLE AREA (ACRES)	SELLING PRICE $/ACRE	IMPROVEMENT COST
1.	Brandon Industrial Park	City of Brandon Zoned M1-M2	350	60	$20 - $53,000	None
2.	Brandon East Park	M. Ross Mitchell Zoned M3	320	320	$1,000	Yes

Contact: Mr. Steve Davidge
Industry, Trade & Tourism
P.O. Box 1300
231 - 10th Street
Brandon, Manitoba
R7A 6N1
Telephone: 726-6250

Gimli Industrial Park:

Contact: Mr. Chris Fulsher
Secretary Treasurer
R.M. of Gimli
Box 1246
Gimli, Manitoba
ROC 1BO
Telephone: 642-8593

Morden Industrial Park:

Contact: Town of Morden
Box 2440
Morden, Manitoba
ROG 1J0
Telephone: 822-4434

Portage la Prairie Industrial Park:

Contact: Mr. Tim Feduniw
Economic Development Officer
Box 490
Portage la Prairie, Manitoba
R1N 3C1
Telephone: 857-9781

Steinbach Industrial Park:

Contact: Mr. Jack Kehler
Steinbach Community Development Corporation Inc.
Box 1090
Steinbach, Manitoba
ROA 2AO
Telephone: 326-9877

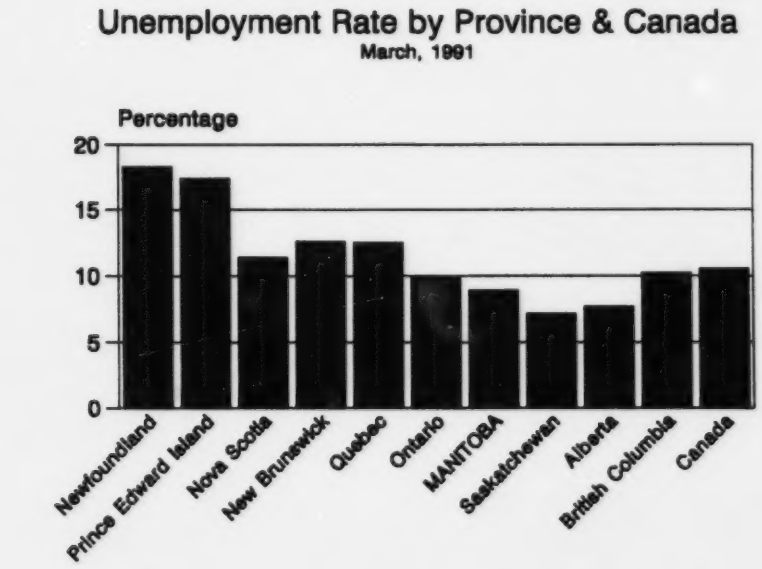
Stonewall Industrial Park:

Contact: Mr. Ted Patterson
Box 83
Stonewall, Manitoba
ROC 2ZO
Telephone: 467-5422

UNEMPLOYMENT RATE BY PROVINCE & CANADA
March, 1991

Newfoundland	18.3%
Prince Edward Island	17.4%
Nova Scotia	11.4%
New Brunswick	12.6%
Quebec	12.5%
Ontario	9.9%
MANITOBA	**8.9%**
Saskatchewan	7.2%
Alberta	7.7%
British Columbia	10.2%
Canada	10.5%

Source: Statistics Canada



Source: Statistics Canada

GENERAL ADULT MINIMUM WAGE RATES IN CANADA
HIGHEST TO LOWEST
(AS OF APRIL 1, 1991)

Jurisdiction	Rate	Effective Date
Northwest Territories*	$6.50	April 1, 1991
Yukon Territory	6.24	April 1, 1991
Ontario	5.40	October 1, 1990
	6.00	November, 1991
Quebec	5.30	October 1, 1990
British Columbia	5.00	April 1, 1990
Saskatchewan	5.00	July 1, 1990
MANITOBA	5.00	March 1, 1991
New Brunswick	4.75	October 1, 1990
	5.00	October 1, 1991
Prince Edward Island	4.75	April 1, 1991
Newfoundland	4.75	April 1, 1991
Alberta	4.50	Sept. 1, 1988
Nova Scotia	4.50	January 1, 1989
	4.75	October 1, 1991
	5.00	January 1, 1992
Federal Government	4.00	May 26, 1986

* This rate applies to residents who live along the NWT Highway System; the rate for workers everywhere else in the NWT is $7.00 per hour.

NOTE: Workers in the construction industry in Manitoba are paid different minimum wage rates from the general adult minimum wage rate depending on trades.

Source: Manitoba Labour
June/91

DIFFERENTIAL MINIMUM WAGE RATES IN CANADA AS OF April 1, 1991 (HIGHEST TO LOWEST)

		Rate Effective Date
Youth Rate		
Northwest Territories	$6.00*	April 1, 1991
British Columbia	4.50	April 1, 1990
Prince Edward Island	4.35	April 1, 1991
Nova Scotia**	4.05	January 1, 1989
Student Rate		
Ontario[1]**	4.55	October 1, 1990
Alberta[2]	4.00	Sept. 1, 1988
Inexperienced Worker Rate		
Nova Scotia**	4.05	January 1, 1989

NOTE:

The federal jurisdiction, Yukon Territory, New Brunswick, Newfoundland, Quebec, Manitoba and Saskatchewan have no special rate for young workers or students.

* This rate applies to residents who live along the NWT Highway System; the rate for workers everywhere else is $6.50 per hour.

** Effective October 1, 1991, Nova Scotia's youth and inexperienced worker rate will be $4.30 per hour; effective January 1, 1992, the rate will increase to $4.55 per hour.

** Effective November 1, 1991, Ontario's student rate will be $5.55 per hour; in 1992, the student differential will be eliminated.

[1] Applicable to students under 18 years of age whose weekly hours do not exceed 28 hours or those employed during a school holiday.

[2] Applicable to students under 18 years of age.

Source: Manitoba Labour
June/91

EMPLOYMENT BY INDUSTRY, MARCH 1991

	(000'S)	SHARE OF TOTAL EMPLOYMENT
Goods Producing Industries	124	25.8%
Service Producing Industries	357	74.2%
TOTAL EMPLOYED	481	100.0%

Agriculture	40	8.3%
Other Primary Industries	9	1.9%
Manufacturing	53	11.0%
Construction	16	3.3%
Transportation, Communication and other utilities	41	8.5%
Finance, Insurance & Real Estate	25	5.2%
Public Administration	35	7.3%
Trade	83	17.3%
Service	178	37.2%
	481	100.0%

Source: Statistics Canada

CULTURE RECREATION AND QUALITY OF LIFE

CULTURE, RECREATION AND QUALITY OF LIFE

A new facility will have no problem attracting an intelligent, skilled and motivated labour force from Manitoba's population. However, should your company decide to relocate employees from elsewhere to Manitoba, you will find Manitoba to have an abundance of excellent recreational opportunities and facilities as well as a richly varied cultural infrastructure.

Manitoba offers employees a safe, clean, progressive environment. It is ideal for raising families as it has a very good public school system and our universities are of a high calibre. The population is friendly and there is a strong sense of community involvement and pride.

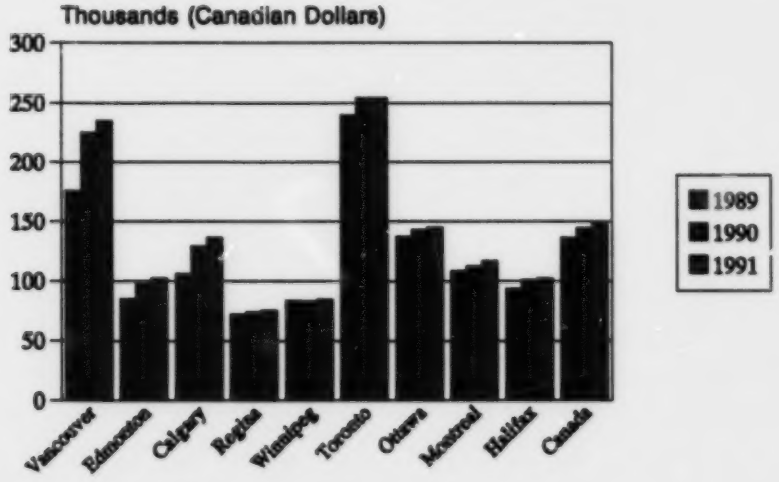
For example, communities are well planned with many parks and playgrounds. There is a vibrant night life with many different sources of quality entertainment. There are also a multitude of arenas, swimming pools, golf courses, tennis courts and other recreational facilities within the city. Outside the city, beautiful lake country and, 4,000 square miles of provincial park land present summer and winter recreational opportunities.

AVERAGE RESIDENTIAL HOUSING PRICES

	1989	1990	1991
Vancouver	$176,000	$225,000	$235,000
Edmonton	$85,000	$100,000	$102,000
Calgary	$106,000	$129,000	$136,000
Regina	$72,000	$74,000	$75,500
Winnipeg	**$83,300**	**$83,000**	**$84,700**
Toronto	$240,000	$254,400	$254,400
Ottawa	$137,000	$143,000	$145,000
Montreal	$108,658	$112,050	$116,540
Halifax	$93,500	$100,535	$102,150
CANADA	$136,000	$144,350	$148,700

Source: Royal LePage Market Survey Spring 1991

Average Residental Housing Prices



Source: Royal LePage Market Survey 1991

COST OF OWNING A HOUSE, SELECTED MAJOR CITIES
JULY - DECEMBER, 1990

	AVERAGE STARTER HOUSE PRICE	PROPERTY TAXES	ANNUAL HEATING	MONTHLY CARRYING COST
Regina	$ 57,670	$ 1,657	$ 560	$ 752
Winnipeg	**63,310**	**2,189**	**670**	**861**
Quebec	68,380	1,847	1,070	916
Edmonton	86,240	1,811	450	1,037
Halifax	81,640	1,438	1,070	1,013
Montreal	89,940	2,115	980	1,143
Calgary	101,190	1,814	440	1,184
Victoria	121,330	1,916	930	1,430
Ottawa	117,730	2,561	620	1,424
Hamilton	127,860	2,057	580	1,470
Vancouver	134,850	1,860	410	1,500
Toronto	179,640	2,203	570	1,934

Source: Canada Mortgage and Housing, January 1991

- According to information published by Canada Mortgage and Housing, Winnipeg has the second lowest starter house prices among the twelve major cities shown above.

- Winnipeg property taxes are above average for the group, and heating costs are below average. The monthly carrying cost, which includes mortgage payments, property taxes and heating, is second lowest.

- A family in Winnipeg requires an income of $32,300 in order to be able to carry the mortgage on the average starter house. The income required in Calgary is $44,390; in Vancouver, $56,260 and in Toronto, $72,530.

- In Winnipeg, 34.8% of renters can afford to buy a home. The proportion in Calgary is 24.7%; in Vancouver,, 12.4%; and in Toronto, 10.7%

- In Winnipeg, 48.4% of MLS houses for sale are in a price range that can be afforded by the average renter. The proportion in Calgary is 20.0%; in Vancouver, 5.7%; and in Toronto, 7.3%.

VACANCY RATES IN APARTMENT STRUCTURES THREE UNITS AND OVER

CITY	April, 1989	April, 1990	April, 1991
Edmonton	3.6%	2.6%	3.5%
Halifax	-	-	4.1%
Montreal	4.2%	4.5%	5.3%
Ottawa	2.1%	1.9%	1.1%
Regina	8.1%	7.6%	5.5%
Saskatoon	10.1%	10.1%	8.0%
Toronto	0.3%	0.7%	1.6%
Vancouver	-	-	1.7%
Winnipeg	**4.6%**	**5.7%**	**5.9%**

Source: Manitoba Rental Market Survey
Canada Mortgage & Housing Corporation

CHILD CARE

A recent Conference Board of Canada report on families and work found that one of the greatest benefits available to employees is access to child care - through referral, on site centres, and availability of spaces within the community.

On a per capita basis, Manitoba offers one of the highest number of licensed child care spaces in Canada. Parents will be assured to know that Manitoba's licensing standards are among the best in North America. Costs for child care, while increasing, are still affordable to most parents, and ifnanical subsidies are available to all parents who qualify. Care is available to children ages 12 weeks to 12 years, in child care centres and family day care homes.

Day care centres must comply with requirements set out in The Community Child Day Care Standards Act and Regulations. These centres are responsible for providing an environment conducive to the health, safety and well-being of children, and a program of activities designed to promote the overall development of the children in care. Major areas outlined in the regulations include those regarding staff qualifications, ratio of staff to child and group sizes, spatial requirements, daily programming and parent's rights.

Businesses considering building on site centres for their employees may qualify for a capital grant of $75,000, available through the provincial government.

Companies wishing to explore the various options available to support working parents can access the Employer Day Care Consulting Service (589-4318). The Employer Daycare Consulting is a specialized division of Consulting and Training Service (CATS) of the Manitoba Child Care Association, a non-profit organization incorporated in 1974 to promote and support quality child care. Employer Daycare Consulting was established in response to a demand for specialized support and assistance to organizations and employers wishing to address child care needs in the workplace. Professional assistance is provided in exploring and implementing various day care options.

Services provided include:

- **Consulting Services** in the areas of board/staff relations, strategic planning, public and community relations, team building, program evaluation and development, conflict resolution, centre design, renovation and construction, behaviour management of children.

- **In House Training**, tailored to the specific needs of the centre in areas of human resource issues, strategic planning, child care issues, behaviour management of children, program planning.

- **Public Workshops**, for child care staff and management are provided throughout the year.

Cultural Activities in Manitoba

Art:

The Winnipeg Art Gallery is one of the city's more unusual buildings. It was designed by Gustavo DeRosa and officially opened in 1971. It features the largest Inuit sculpture collection in the world. Private galleries are found in every area of the city and cater to all tastes.

Dance:

The Royal Winnipeg Ballet is synonymous with dance in Winnipeg. This dynamic, versatile young company has gained international acclaim and students from around the world are attracted to its excellent professional division. Winnipeg's Contemporary Dancers have built their reputation on skill, daring, innovation and creativity. The company presents three works annually. Ethnic dance groups underline Winnipeg's cultural heritage in demonstrations of their folklore with all the finesse of professional dance troupes. These dancers are at their very best during Folklorama.

Music:

Two classical series, a Pops series, a Children's series and a Christmas presentation keep the Winnipeg Symphony Orchestra busy throughout a long season. On a smaller scale, the Winnipeg Chamber Orchestra presents an excellent candlelight series. Students and the University of Manitoba School of Music present recitals and concerts, as well as featuring guest artists. The Manitoba Opera Association presents three full productions annually featuring guest artists, as well as an exceptional array of local talent. Winnipeg school children and others look forward to the annual Manitoba Music Festival as an opportunity to showcase their talent and benefit from thoughtful adjudication.

The Centennial Concert Hall, Pantages Playhouse Theatre and the Walker Theatre are scenes for a variety of musical presentations and celebrity concerts. Major rock groups often appear at the Winnipeg Arena. For Jazz lovers, there is the Winnipeg Jazz International Festival.

Theatre:

The Manitoba Theatre Centre presents six main stage productions each year. The Warehouse Theatre, affiliated with M.T.C., brings new and sometimes experimental works to Winnipeg audiences. Canada's oldest consistently performing theatre company, Le Cercle Moliere, is an innovative French language company whose productions are well worth seeing.

Other groups offering regularly scheduled productions are Prairie Theatre Exchange and the Manitoba Theatre for Young People. The drama departments of our universities present excellent productions annually. Rainbow Stage, in Kildonan Park, presents two outdoor musicals each summer.

Museums:

There are about 130 museums in large and small communities throughout the province, 30 in Winnipeg alone. Pioneer heritage, history (cultural, ethnic, community, natural history), science, sports, agriculture and farm implements, shipping, clothing, mining, and automobiles are among the many subjects around which museums have been developed. Many museums are open year-round, but others are seasonal in operation.

The Manitoba Museum of Man and Nature is one of the finest interpretive museums in Canada. The Aquatic Hall of Fame and Museum of Canada features aquatic memorabilia, a library of aquatic sports literature and one of the largest sport stamp collections in the world.

Annual Events:

Manitoba has more than 50 festivals that reflect the richness of its natural resources and the various cultural backgrounds of the people. All are fun-filled events with contests, special foods, and celebrations. Outstanding among them in summer are the Provincial Exhibition of Manitoba in Brandon, Folklorama in Winnipeg (ranked as one of North America's 100 best annual events), the Icelandic Festival in Gimli, the Winnipeg Folk Festival (one of the largest in North America), Canada's National Ukrainian Festival in Dauphin, Opasquiak Indian Days in The Pas, Pioneer Days in Steinbach, York Boat Days in Norway House, Thompson Nickel Days in Thompson, the Morris Stampede in Morris, the Trout Festival in Flin Flon, the Fete de la St. Jean Baptiste in La Broquerie, the Threshermen's Reunion in Austin, and the Corn and Apple Festival in Morden. Winter brings the Festival du Voyageur in St. Boniface, the Trappers' Festival in The Pas, the Canadian Power Toboggan Championships in Beausejour, and the Royal Manitoba Winter Fair in Brandon.

Films:

There are 17 movie theatres with a total of 27 screens, and one drive-in theatre in Winnipeg. The majority of movie houses are located downtown. There are also four theatres that concentrate on offering special series.

Winnipeg's Sport Facilities

Manitoba is a sports-minded province, with a mixture of professional, amateur and recreational activities throughout the year. **Winnipeg, for example, is home to three professional teams: the Jets of the National Hockey League, the Canadian Football League's Blue Bombers, and the Fury of the Canadian Pro Soccer League.** Most communities in Manitoba have arenas, ball fields and other developed recreation facilities. For example, in Winnipeg there are five outdoor, fully developed fitness trails in Winnipeg and two fully equipped city owned recreation complexes. As well, the YMHA and five YM/YWCA branches have fully equipped athletic facilities. There are 14 privately owned fitness clubs. The city operates 13 indoor swimming pools and there are various swimming clubs. Winnipeg also has 20 bowling establishments.

Curling is a pleasant winter sport enjoyed by many Winnipeg residents. There are 22 curling rinks in the city offering leagues of all descriptions. There are two indoor tennis clubs and the city operates public, outdoor tennis courts in every community. In terms of skating and hockey, there are 18 indoor skating rinks and numerous outdoor facilities. Hockey leagues operate at all ages and skill levels. For spectators of hockey, there are the Winnipeg Jets of the National Hockey League. There are also figure skating and speed skating clubs. Other sporting endeavours include:

Cycling:

Cycling is a favourite summer activity for many residents. Recreational cyclists can be found in all city parks and quiet riverside streets. The city closes certain streets to vehicular traffic on Sundays during the summer to allow cyclists to enjoy the quiet beauty of these areas. Competitive cycling is also active. Track cycling is available at the Winnipeg Velodrome.

Football:

The province has very active high school, junior and community club tackle and touch football leagues as well as a women's touch football league. In addition, the University of Manitoba Bisons provide quality entertainment. The Winnipeg Blue Bombers of the Canadian Football League offer Manitobans professional football.

Riding:

Many Manitobans take advantage of the riding clubs and schools which offer everything from dressage to western-style trail rides. Winnipeg also has a newly formed special riding club for handicapped children. A new riding facility was built at Birds Hill Park for the 1990 Western Canada Summer Games. This facility includes dressage rings, show jumping and cross country trails.

Horse Racing:

The thoroughbreds run from early spring to late fall at Assiniboia Downs. The Manitoba Great Western Harness Racing Circuit operates throughout Southern Manitoba from May to September. Chariot races are also popular at most country rodeos in the province.

Auto Racing:
Winnipeg Speedway and Gimli Raceway provide racing fans with fun and excitement. Demolition Derbies are held frequently at Winnipeg Beach.

Skiing:
Manitoba has developed downhill ski resorts which cater to most levels of skiing. Downhill beginners can ski at Springhill near Bird's Hill Park. Another popular outdoor winter sport in the province is cross-country skiing. All of the municipal golf courses are open for cross-country skiing. Trails are lighted so that you can get in an extra run after the early winter sunset.

Golf: The province boasts 107 excellent golf courses, public and private. Many tournaments are held in the province from June to September, including the Manitoba Open with cash prizes totalling $100,000.

Soccer:
The city hosts a professional soccer team known as the Winnipeg Fury which competes on a national basis. A new soccer complex has been built for Manitoba Soccer Association leagues.

Other relatively new facilities include the Winnipeg Rowing Club, Maple Grove Rugby Park and the John Blumberg Softball Quadriplex.

Provincial and National Parks

Adventures in Manitoba can be as rugged or as civilized as you wish. The southern and western areas of Manitoba are rolling prairie and sweeping uplands. On the high Manitoba Escarpment you can discover Riding Mountain National Park, where the townsite, Wasagaming nestles on the shores of Clear Lake.

Manitoba's parks near Winnipeg offer a naturally refreshing respite from a busy schedule. These Parks include Beaudry Provincial Heritage Park, Red River Corridor, Birds Hill Provincial Park and Grand Beach Provincial Park.

Manitoba's network of over 150 natural recreation, heritage, wilderness and wayside parks offers a unique opportunity to explore the great outdoors.

Regional Parks:

Winnipeg has an extensive park system. The city offers residents the beauty and charm of 2,964 hectares of park land with services, facilities and attractions for every member of the family. The city maintains over 33 kms of riverbank to afford public access to one of the city's natural assets.

In addition to riverbanks, playgrounds, neighbourhood parks and athletic fields, the city has several major regional parks. Assiniboine Park is a favourite with many because of its great diversity including the English Gardens and special floral displays in the Conservatory. Other features include: cricket and field hockey, picnic facilities, a miniature train, and a zoo. In winter this park is a delight for cross-country skiing, snowshoeing, and skating with the added touch of horse-drawn sleigh rides.

Kildonan Park's formal gardens, large old trees, monuments to the early Selkirk Settlers, and abundant playing fields draw families throughout the year. An olympic-size outdoor pool and Rainbow Stage add to the summer fun and excitement. St. Vital Park has a fitness trail, picnic areas and expansive play areas.

Kilcona Park is the city's newest and most ambitious regional park. Located on a reclaimed landfill site in the city's northeast, this park will be the city's largest. Initial development includes the Harbour View 9-hole golf course and recreation complex complete with miniature golf, lawn bowling, children's play area, tennis courts, pedal and row boat rentals. The clubhouse is set on a man-made lake, includes a cafeteria, banquet facilities, viewing tower, outdoor dining deck and a golf proshop.

Natural park areas are also gaining popularity. Within the city the Assiniboine Forest is home for a herd of white-tailed deer and a great variety of birds. This park is a joy for walkers, cyclists and cross-country skiers. Cross-country skiers flock to the quiet solitude of La Barrier Park, south of the city. Located along the La Salle River, this park is ideal for a canoe trip or a walk in the woods.

The above descriptions include only some of Manitoba's attributes but in summary, Winnipeg has many fine cultural amenities and superior recreational opportunities.

LABOUR

LABOUR

Manitoba can supply your company with a dedicated and skilled workforce. We will be pleased to introduce your officials to any of Winnipeg's employers who will address the subject of the productivity and skill level of Manitoba's workers.

Manitoba's diverse economy provides stability and protection from the wide economic fluctuations that have impacted on other Canadian industrial centres from time to time. Over half a million people are employed in Manitoba in a wide variety of occupations. The table below illustrates the broad range of jobs handled by our population.

MANITOBANS EMPLOYED BY OCCUPATION - March, 1991
(000's)

All Occupations	481
Agriculture	40
Other Primary	9
Manufacturing	53
Construction	16
Transportation and Utilities	41
Trade	83
Finance, Insurance and Real Estate	25
Service	178
Public Administration	35

Source: Statistics Canada

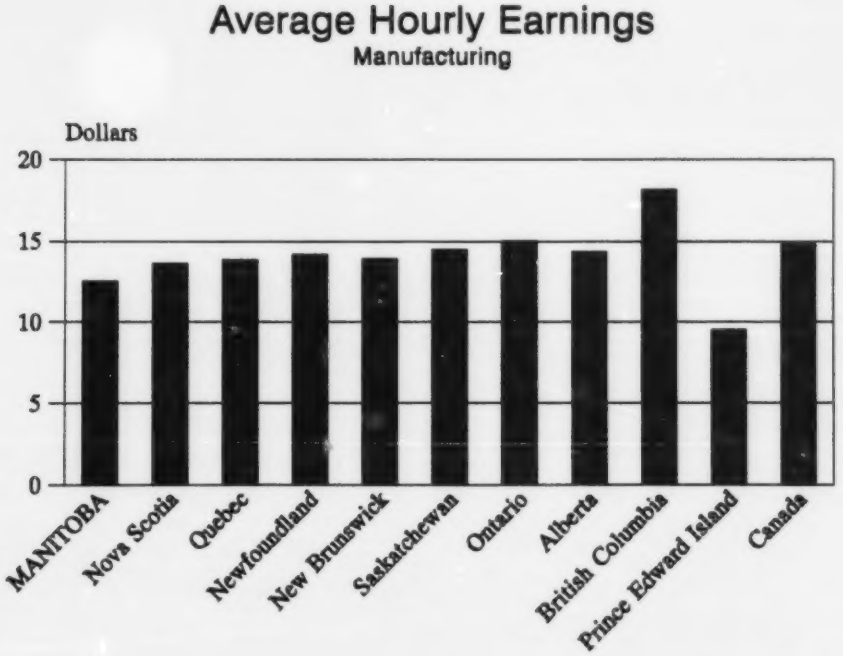
COMPETITIVE WAGE RATES

Manitoba is also highly competitive in terms of wage rates for industrial workers. The table below points out the Canadian averages for manufacturing wages. One reason for the competitive wage structure in Manitoba is that our cost of living is one of the lowest in Canada.

For the purpose of comparison, an employer in Manitoba should consider approximately 25% supplement for the purpose of fringe benefits. Fringe Benefits vary from one company to another and include a wide variety of labour compensation features. Examples of items to be considered in this category include: subsidized meals, uniforms and clothing; athletic, recreational and daycare facilities; employers' contributions to health and welfare schemes, pension plans, workers compensation and unemployment insurance funds.

	Average Hourly Earnings Manufacturing January, 1991	**Average Weekly Earnings All Industries January, 1991**
Manitoba	**$12.54**	**$468.15**
Nova Scotia	13.63	468.77
Quebec	13.86	518.36
Newfoundland	14.19	502.69
New Brunswick	13.93	482.67
Saskatchewan	14.49	461.29
Ontario	15.01	547.14
Alberta	14.35	526.61
British Columbia	18.17	528.22
Prince Edward Island	9.53	438.01
CANADA	14.80	526.02

Source: Statistics Canada



Source: Statistics Canada
January, 1991

LABOUR FORCE STABILITY

Time Lost Due to Work Stoppages, By Province
January to December, 1990(p)

	Person Days Lost	Days Lost Per 1,000 Paid Workers*
	1990	1990
NFLD.	118,530	648.9
P.E.I.	0	0.0
N.S.	58,710	171.7
N.B.	389,610	1,484.2
QUEBEC	1,100,740	391.9
ONTARIO	2,957,290	654.7
MANITOBA	**9,430**	**21.5**
SASKATCHEWAN	25,300	72.5
ALBERTA	155,990	143.8
B.C.	207,300	156.9
CANADA	5,153,140	453.9

(p) = preliminary

NOTE:
Person days Lost per l,000 paid non-agricultural workers.

* Source for the number of paid workers in The Labour Force, Statistics Canada Catalogue 71-001: Labour Canada

Source: Labour Data Branch, Labour Canada

Labour Productivity: In large measure labour productivity is a function of process technology and factory utilization. By and large Manitoba's labour productivity is comparable to the Canadian average despite having large concentrations of workers in industries of low capitalization such as the food and beverage sector and clothing manufacturing.

Union Activity: In 1988 (latest figures available), 36.1% of paid workers in Manitoba were union members. This compares with Quebec where 38.9% of paid workers belonged to a union, 38.6% in British Columbia and 52.1% in Newfoundland. There are 14 labour organizations in Manitoba whose membership is 2,000 or greater. The three largest unions are in the public sector.

AVAILABILITY OF MANPOWER

Manitoba offers a wide range of occupations. Provided below are some prevailing wage rates as at September, 1990.

Occupation	Wage Rates
Accountants	$3300/month
Chemists	$2800/month
Tool and Die Makers	$2100/month
Machinists	$2250/month
Welder	$1950/month
Airframe Assembler	$2200/month
Electronic Equipment Mechanics	$2050/month
Aero Engine Mechanics	$2100/month
Millwright	$2850/month
Heavy Duty Equipment Mechanic	$2050/month
Farm Equipment Mechanic	$1225/month
Diesel Mechanic	$1986/month
Carpenters	$2300/month
Truck Drivers	$1560/month + mileage
Electronic Equipment Assembler	$1300/month
Labourer, Assembly	$1075/month
Assembler, Production	$1475/month
Maintenance Mechanic	$1700/month
Material Handler (Labourer)	$1200/month

Source: Prevailing Wage Rate System
Employment and Immigration Canada

EDUCATION AND TRAINING SUPPORT

1. EDUCATIONAL INSTITUTIONS

Three Universities, three Community Colleges and numerous technical schools, educate and train Manitobans in a multitude of disciplines and skills equipping them with the knowledge required to be successful in an ever changing labour market. Manitoba's educational institutions work closely with industry in setting curriculum and providing specialized training for particular corporate needs.

Enrolment	1990	Full	Part
Brandon University	5,734	1,515	3,219
University of Manitoba	30,804	14,444	16,360
University of Winnipeg	10,282	2,559	7,723
Assiniboine College	8,339	3,391	4,988
Keewatin College	2,914	1,432	1,482
Red River College	29,243	7,655	21,588

I) UNIVERSITY OF MANITOBA

The University of Manitoba, located in Winnipeg, is recognized as one of Canada's leading research and teaching universities. The University of Manitoba offers all of the province's professional programs as well as the arts and sciences for a total of more than 75 degrees, diplomas and certificates. Faculties and schools include: agricultural and food sciences, architecture, fine arts, arts, continuing education division, dentistry, education, engineering, graduate studies, human ecology, law, management, medicine, music, nursing, pharmacy, physical education and recreation studies, science and social work.

In 1990-91, the student body numbered 30,804 full and part-time students, including 3,000 graduate students. In the same year teaching staff numbered 1,975 full and part-time instructors. The university's operating budget was $217.7 million in 1990/91, and external income for research and special projects was $76 million, of which $52.6 million was specifically designated for research.

In addition to regular students, over 11,000 people registered for credit and non-credit courses leading to a variety of certificates through the Continuing Education Division, including management studies, humanities and professional studies and special programs. The division is also available for consultation with individuals, groups and organizations (for profit and non-profit) who wish to develop training suitable to their needs.

II) RED RIVER COMMUNITY COLLEGE

The last two decades have seen substantial changes in the way Red River Community college handles post-secondary training. The College provides high-quality educational and training opportunities to assist with economic, cultural and social development in Manitoba within the context of a global marketplace.

The College has worked to strengthen its ties with business, industry, labour, government and other educational organizations. As RRCC moves into the '90s and beyond, a number of innovations are being put into place.

One of these is Red River's expansion of programs using Cooperative Education as a major mechanism for delivering College programs and creating stronger links with all sectors of the community. Specific programs have been targeted to begin using Cooperative Education in September, 1991, and over the next few years, several more programs will be identified and included.

In an effort to help Manitoba business and industry compete more successfully in the global marketplace, Red River is moving forward to meet the demand for flexible, and perceptive methods of delivery and accreditation. To this end, the College has begun to implement a process and philosophy of Total Quality Management (TQM) in both its training programs and college operations. In the '90s, success in the international marketplace means that the "quality of products and service" is one of the highest priorities for a company. For the College, this means a commitment to improving quality in teaching, in learning, in product manufacturing, in service performance and in program evaluation.

Red River has its roots in the first technical training centres which were established in Winnipeg in the late 1930s. Today, Red River's main campus is made up of 11 buildings covering 65 hectares (160 acres). Together with its off-campus sites and three regional centres in Portage la Prairie, Selkirk and Winkler, the College serves an annual day-time enrolment of almost 10,000 students, and another 20,000 students through its Continuing Education Division.

Through its academic divisions, Applied Arts and Business, Health, Family and Related Sciences, and Trades and Technology, Red River offers over 85 full-time certificate and diploma programs ranging in length from six weeks to two years.

To further enhance the learning opportunities for Manitobans in smaller communities, Red River will soon establish new regional centres in Gimli and Steinbach.

As part of a recent $6 million joint aerospace initiative involving government and industry, RRCC will introduce training in Aircraft Manufacturing and Repair, Composite materials Technician, and Avionics Technician by September, 1992.

In an on-going program evaluation process, faculty and staff meet regularly with employers through college program advisory committees. the direct collaboration with appropriate sectors of business, industry and community organizations allows Red River the flexibility to implement up-to-date recommendations to meet changing needs as dictated by the marketplace.

Red River Community College (cont'd)

The move to make Red River Community College a fully self- governing institution by 1993 will allow its operation to be more responsive to the needs of its client communities, and together, the various partners will develop and design new programs and modals to meet the future.

For more information please call: Serena Stone, Communications Services, Red River Community College (204) 632-2294 FAX: (204) 632-7834

iii) UNIVERSITY OF WINNIPEG

The University of Winnipeg, located in the downtown area, awards undergraduate degrees in Arts, Science, Education and Theology and offers some graduate programs including Public Administration. For the adult learner, our Collegiate provides a Grade 11 and 12 education in convenient time slots. Our Continuing Education courses also help employees to upgrade skills and prepare for the future.

The university will be celebrating the 25th anniversary of its charter in 1992, although our history dates back more than 100 years. Today, total enrolment is about 10,282 of which almost 7,723 are part-time students.

iv) SOUTH WINNIPEG TECHNICAL CENTRE (SWTC)

The SWTC has been offering skills training since September 1985. Of particular interest are courses in Industrial Electronics, Industrial Control and Automation and Auto CAD training.

The SWTC has earned an excellent reputation in the business community for its ability to respond quickly to employer's training needs. Training in Electronics, PLC's CNC, Welding upgrading, and Auto CAD are but a few training packages that have been recently delivered.

The SWTC has the ability to design very specific courses to meet employers training needs. Training is offered primarily at the Centre but can easily be delivered at the employer's premises.

2. TRAINING ASSISTANCE

The delivery mechanism for industrial training assistance often takes the form of a cooperative venture between the federal and provincial governments. The Province through its education system and various teaching facilities can provide courses, instructors, equipment and training techniques to augment those of the company itself. Both the federal and provincial governments participate in the form financial assistance programs. The federal program is administered by the Department of Employment and Immigration. The pertinent federal programs under the Canadian Jobs Strategy are discussed below.

Information on the Payroll Tax Refund for Employee Training is included under the Taxation portion of this document.

a. SKILL INVESTMENT

I) RETRAINING OPTION:

Wage Reimbursement: up to 60% off-the-job and 25% on-the-job, up to a maximum of $350 per week.

Direct Training Costs: up to $20.00 per participant per training hour for course fees and related training costs.

Provisions for Disabled: Full reimbursement for special training costs up to a maximum of $10,000.

II) TRAINING TRUST FUNDS:

Federal Contribution to fund as % of employee and employer contributions:

- first year: 50% of contributions up to a maximum of $200,000.
- second year: 33 1/3% of contributions up to a maximum of $100,000.
- third year: 33 1/3% of contributions up to a maximum of $100,000.

Total for three years: $400,000.

III) LANGUAGE AT WORK:

Provide literacy, numeracy and writing skills to employed immigrant women on-site.

Federal Contribution is 100% of course costs up to $20 per participant per training hour. Employer contributes training classroom and one hour of paid release time for every two hours of training.

b. SKILL SHORTAGES PROGRAM

The Skill Shortages program is designed to help employers train workers in occupations designated to be in short supply either now or in the future. Employers will have the option of upgrading skills of existing employees or training newly hired employees. Self-employed workers also have access to the Skill Shortages Program.

Work Place Based Training

- Wage Reimbursement: up to 60% off-the-job and 25% on-the-job, up to a maximum of $350 per week.
- Direct Training Costs: up to $20.00 per participant per training hour.
- Provisions for the Disabled: Up to $10,000 for modifications to the work place.

The Work Place Training provides the best opportunity for your company to utilize the combination of federal funding/provincial course assistance. Staff training courses can be designed by ourselves or in co-operation with the appropriate provincial institution. Likewise delivery of the course can be on or off the job, in-house or at the appropriate institutional facilities.

RESEARCH AND DEVELOPMENT INFRASTRUCTURE

RESEARCH AND DEVELOPMENT INFRASTRUCTURE

Outside of assistance provided by both federal and provincial government programs, a sizeable research and development community and infrastructure exists in Manitoba.

R&D facilities are operated by agencies of both levels of government and by the universities (particularly the University of Manitoba), all of which have strong linkages to the private sector at all levels - from board representation to joint ventures to fee-for-service contracts.

In addition, private engineering consulting firms, often with international ties, have the capabilities to perform both theoretical and practical analysis. Many medium size companies, which might be suppliers, have research and development capabilities offering the potential for joint venture R&D projects in a wide range of areas.

In total, the facilities contribute to fostering a collegiate network of expertise which are linked through formal professional associations and informal groups.

MANITOBA RESEARCH COUNCIL

(I) Industrial Technology Centre

The Manitoba Research Council, a non-profit agency supported by the Province of Manitoba, has its Industrial Technology Centre located in Winnipeg. The Industrial Technology Centre is staffed with scientists, engineers and technologists to assist Manitoba industry to achieve better economic performance through the appropriate use of modern technology.

To accomplish this goal of assisting in the economic development of Manitobans, the Manitoba Research Council offers a wide range of technical advisory and on-line computer information services to assist in the evolution of product concepts and to solve technical problems. The advisory services department of the Manitoba Research Council has the only publicly accessible Visual Search Microfilm System, which features 6,000,000 pages of suppliers' catalogue information for the sourcing of components.

The Manitoba Research Council also offers their expertise to companies on a contractual basis. In a cost effective manner, companies can employ the Manitoba Research Council's highly trained experts to augment their inhouse skills, to provide themselves with a sophisticated product design team, or to have a state-of-the-art technology team working for their economic benefit.

Services that are available from the Manitoba Research Council:

-workplace air quality
-thermal packaging analysis
-electronic product design
-finite element analysis
-surface mount technology
-prototyping
-equipment retrofit
-leachate testing
-hazardous waste analysis
-metallurgical analysis
-mechanical product design
-software development
-vibration analysis
-physical testing
-noise analysis
-trace metals and organics

(ii) **The National Agri-Food Technology Centre**

The Manitoba Research Council's National Agri-Food Technology Centre, located in Portage La Prairie, offers specialized testing and product development for the food, feed, and beverage industries. The Food Technology Division offers Manitoba companies and individuals technical advisory and information services to enhance the economic viability of the food, feed and beverage sectors.

The Manitoba Research Council also offers their expertise to companies on a contractual basis. The National Agri-Food Technology Centre represents a cost effective vehicle for companies to access all the crucial skills of a major research and development facility without the associated operating costs of having these skills in-house. Skills, which will allow them to compete in the national and international marketplaces.

The services offered by the MRC's National Agri-Food Technology Centre are:

- product development, which incudes sensory evaluation, formulation development, formulation scale-up, ingredient sourcing, packaging, labelling assistance, and shelf life studies.
- food engineering, including process development, equipment sourcing, ad plant layout design.
- evaluation and testing, including nutritional analysis, contaminants analysis, plant audits, microbiological evaluations.
- pilot plant production to produce product for test marketing and to allow small processors to develop their markets prior to major capital investments. Our pilot plant is approved by Agriculture Canada and the USDA for meat production.

The Manitoba Research Council is accredited for specific tests by the Standards Council of Canada.

The Manitoba Research Council provides direct access to provincial and federal government assistance programs such as the NRC's Industrial Research Assistance Program (IRAP), a program provided in Manitoba through NRC personnel and MRC specialists.

From an idea to the final packaged product, the Manitoba Research Council's National Agri-Food Technology Centre offers the key to the economic growth of the vital food sector.

UNIVERSITY OF MANITOBA

Commitment to research has earned the University of Manitoba recognition as one of the Canada's research universities. The consistent high quality of these research activities by U of M staff now generates more than $52.6 million annually in grants and contracts, and $23.5 million in funding for special projects, including international programs. With over 24,500 students and 5,200 staff members, the university provides a major centre for research activity and technology transfer.

U of M research plays a vital role in the economic and social development of the province; its results contribute to the well-being of people in Manitoba on a national and international scale.

The University's centres and institutes provide a focus for interdisciplinary studies and opportunities for technology transfer to industry. Centres and institutes include the Institute for Technological Development (Engineering); Centre for International Business Studies (Management); Manitoba Nursing Research Institute; Solomon Sinclair Farm Management Institute; Transport Institute; Accelerator Centre (Physics); Asian Studies Centre (Arts); Centre on Aging; Centre for Ukrainian Canadian Studies; Centre for Higher Education Research and Development; Centre for Professional and Applied Ethics; Legal Research Institute; Manitoba Institute of Cell Biology; Sports and Exercise Research Institute; Institute for the Humanities; Industrial Mathematical Sciences Institute; and the Natural Resources Institute.

In 1990, The Engineering and Applied Sciences Industrial Affiliates Program was launched by the Faculties of Engineering and Agricultural and Food Sciences with the assistance of Manitoba Industry, Trade and Tourism and the Natural Sciences and Engineering Research Council. The program offers the opportunity for businesses to have access to the university libraries, and be recipients of information specific to their business, through a liaison professor in one of a number of faculties. University researchers have opportunities to focus their research on practical problems or to transfer their concepts from lab to application much more quickly with the participation of the affiliating firms.

Facilities at the University are available for antenna design; materials testing; corrosion chemistry; aerodynamics testing; metallurgical laboratory; laser testing; nuclear magnetic resonance and many other functions in science and engineering. Other facilities include a textile testing service, a sensory analysis lab (foods and nutrition), a psychological testing service; dental clinic; and fitness testing.

The University is the location of five research and service organizations; the federal government's Freshwater Institute, and the Canada Agriculture Research Station; the provincial government's Agricultural Services Complex, and the Cadham Provincial Laboratory; and the independently supported Rh Plasma Fractionation Laboratory. The University also has close ties with teaching and research hospitals, including the St. Boniface General Hospital and the Health Sciences Centre.

CANADIAN INSTITUTE OF INDUSTRIAL TECHNOLOGY

The Canadian Institute of Industrial Technology, operated by the National Research Council Canada, is located in downtown Winnipeg, Manitoba. The mission of CIIT is to promote, support, and undertake research and development in advanced industrial technologies and related management concepts aimed at improving Canada's manufacturing productivity and competitiveness.

The Institute undertakes research and development in Advanced Industrial Technology, collaborating on a national basis with Industry, University, Government and other organizations, as well as other Institutes of the National Research Council Canada.

The focus of Advanced Industrial Technology at CIIT is in the area of manufacturing process control, and in particular:

- Information systems in manufacturing;
- Sensor-based systems for quality control and inspection; and
- Advanced manufacturing technology application, including integrated manufacturing demonstration and feasibility facilities.

The work in information systems currently focuses on knowledge-based systems for manufacturing; production operations scheduling, planning and modelling, diagnostics and advisory control systems; enterprise modelling and simulation; and scheduling systems as part of CIM.

The sensor-based systems program involves the investigation, design and development of sensor-based technologies that may be applied to the inspection process, especially in the area of computer vision-based coordinate measurement, electromagnetic sensor detection of field signature in electronic components, and the development of a compensatory/comparator software system that will migrate data from various sensory systems, i.e. CMM, laser scanners, stereo vision, etc., to NC machine tools and fast phototyping systems, in order to create feedback inspection loops, and therefore enhance control and precision of the manufacturing processes.

The development of computer integrated manufacturing systems and technologies are concentrated in the areas of material handling using self-navigating vehicles, computer aided phototyping using the Stereolithography process, robot motion planning and simulation, the development of precision enhancement technologies, and the management of CNC data.

AECL RESEARCH - WHITESHELL LABORATORIES

At Pinawa, northeast of Winnipeg, AECL Research (an operating division of the federal Crown agency, Atomic Energy of Canada Limited) maintains a major research and consulting services facility, with annual revenues of $80 million and employing over 300 professional scientists and engineers and a similar number of skilled technicians. AECL Research's mandate is to perform R&D in support of three sectors - energy, health and the environment.

Whiteshell Laboratories, as the western Canadian arm of AECL Research, has expertise in many basic and applied sciences, mathematics, engineering, manufacturing support and administrative skills. Its major strength is in its multi-disciplinary approach to problem-solving. As well as offering services related to nuclear development (e.g. waste management, safety, environmental science, radiation applications research, fuels, materials, thermalhydraulics), Whiteshell Laboratories also offers expertise and services related to a wide range of applications, some of which include:

- Electron microscopy
- Neutron activation analysis
- Surface analysis
- Analytical and research chemistry
- Meteorological and environmental research and impact, and hazardous materials management
- Comprehensive mechanical testing and metallurgical services (e.g. corrosion testing)
- Trace element analysis
- Combustion testing
- Cost benefit and risk analysis

Much of the technology AECL Research has developed for Canada's nuclear program has application in non-nuclear industries. This technology is being marketed through the site's Environmental Services.

Serviceable land has also been identified on Whiteshell Laboratories' 4,046 hectare (10,000 acre) reserve for the development of an industrial/research park. Additional services are available on a contract basis to firms interested in siting in close proximity to the Laboratories including, material handling (stores, shipping/receiving), technical information library, computer training, security/fire protection and training, industrial safety, quality assurance, environmental impact assessment, construction, maintenance (electrical, mechanical, instrumentation, computer), utilities, occupational health unit and ambulance.

FEDERAL ASSISTANCE FOR RESEARCH & DEVELOPMENT

The federal government provides significant support for research and development including:

Department of National Defence

Defence Industrial Research Program: This program is designed to improve the capability for innovation and technological development in Canadian industry. The Department of National Defence provides financial support to applied research projects relevant to defence technologies. To be eligible for grants of up to 50 percent, companies must be incorporated in Canada.
Information: Ottawa/Hull (613) 995-2534

Industry, Science and Technology Canada (ISTC)

Manufacturing Visits Program: This service organizes structured visits for senior managers of manufacturing companies to firms currently employing new manufacturing technologies. A pilot series of visits has been organized for Manitoba, New Brunswick and Nova Scotia.

Program for Export Market Development (PEMD): PEMD is a trade promotion program of External Affairs and International Trade Canada, implemented jointly with ISTC. It offers financial assistance to Canadian businesses for export promotion. To reduce the risks involved in penetrating a foreign market and to encourage companies to become exporters, the program shares the costs of activities that Canadian companies could not or would not undertake alone. In addition, existing Canadian exporters are encouraged to enter new geographic and product markets. All activities under PEMD are aimed at generating export sales and involve such undertakings as trade fairs, trade missions, visits outside Canada, visits of foreign buyers, project bidding, permanent sales offices abroad, marketing agreements and special activities.

Strategic Technologies Program: Financial assistance is provided to support alliances in research, development and technology applications in the fields of information technology, biotechnology and advanced industrial materials. These industry-led alliances can involve foreign firms, universities or research institutes that want to pool resources on research and development and on pre-commercial technology application projects.

Inquiries: Manitoba ISTC Regional Office Tel: (204) 983-ISTC FAX: (204) 983-2187.

National Research Council (NRC)

Canada Institute for Scientific and Technical Information (CISTI): As the country's largest scientific and technical information service, the Institute provides instant on-line access to North America's most extensive collection of scientific and technical literature. Its services include customized literature searches, the development of highly specialized data banks and expertise in finding answers to complex questions. CISTI responds to nearly half a million requests for technical documents each year.

Federal Government Programs (cont'd)

Industrial Research Assistance Program (IRAP):

This program is managed by the Industry Development Office (IDO), which assists with and promotes the use of technology in Canadian firms where technology can help to improve their competitiveness in world markets. In 1988-89 IRAP provided more than 5,000 Canadian firms with easy access to a broad range of mature to leading-edge technologies. Firms were located in every region of Canada, operating within the local economy as well as the international marketplace. Technologies included informatics and artificial intelligence, advanced materials, biotechnology, construction, agriculture, aquaculture, medicine and health care and manufacturing.

The IRAP Network brings together with NRC some 70 associate organizations from other federal departments, provincial agencies, universities and colleges, institutes and other professional bodies.

The Field Network is composed of technology advisors - engineers or scientists with considerable industrial experience - from NRC and its IRAP associate organizations. They provided Canadian firms with services, ranging from delivery of personal professional guidance and technical advice to the transfer and adaptation of needed technology, from a vast array of government laboratories and research facilities both nationally and internationally. This Network focuses on the short- and medium-term needs of firms.

The Laboratory Network is composed of project managers - scientists and engineers with industrial research and development experience - who provide Canadian firms with access to the scientific and technical resources of all major research and development establishments. These managers are located both at NRC and at the facilities of science-based federal departments. The Network also sponsors technology transfer officers at 14 Canadian universities and is responsible for managing IRAP's cost-shared funds for support of major collaborative projects involving Canadian firms, government and university laboratories and foreign sources of technology.

Canadian Institute of Industrial Technology

Provides a complete research environment for technical teams from industry, universities and government to work on cooperative projects in areas such as artificial intelligence and expert systems, computer-integrated manufacturing and sensor-based robotics. All research projects are initiated by the partners. Commitments can range from basing an entire operation at the Institute to giving a small research team or technical group a specific problem to solve.

Inquiries: NRC Regional Office: Tel: (204) 983-7692 Fax: (204) 983-3154

Natural Sciences and Engineering Research Council of Canada (NSERC):

Program of Scholarships and Grants in Aid of Research: The objective of this program is to promote and support research and to provide highly qualified personnel in natural sciences and engineering. It promotes and supports targeted research in fields of national importance and forges closer links between the university research community and other sectors of the economy. The program is divided into three major activities: Research Base, Targeted Research and Scholarships and International Programs.
Inquiries: NSERC Tel: (613) 996-1898 Fax: (613) 992-5337

Source: 1991 Guide to Federal Programs and Services

ECONOMIC DEVELOPMENT PROGRAMS

The government of Manitoba's economic development strategy focuses on long-term priorities to ensure sustainable growth of the economy. The province fosters a win-win climate for new, expanded or existing business interests.

The government of Manitoba has financial incentives and support programs designed to assist businesses in every sector.

FEDERAL GOVERNMENT PROGRAMS

Western Diversification Initiative

The Department is responsible for federal economic activities in Western Canada, particularly those aimed at developing new products, markets and technology. The essential requirement that determines the acceptability of proposals is the contribution each project or activity would make to the diversification of the western economy.

Co-ordination of Business Development: Western Economic Diversification helps to make easier the creation of new enterprises and businesses consistent with federal international trade policy. It represents Western Canadian interests in the development of national policies and the design of national programs, and ensures that Western Canada is effectively linked with decision-making in Ottawa.

The Western Diversification Fund: This fund, which represents a commitment of $1.2 billion, is designed to assist projects of strategic importance to the West. Repayable funding is given to projects that would not proceed without support from the Department. A key feature of the Program is that service and resource-related industries as well as non-profit business organizations are eligible for funding where they meet the diversification criteria of new products, new markets, new technology , import replacements and improved industry-wide technology.

Industry, Trade and Tourism staff work closely with interested business concerns to assist in exploring opportunities under the Western Diversification Initiative as well as other appropriate federal programs.

PROVINCIAL GOVERNMENT PROGRAMS

Manitoba Business Development Fund - Provides financial support to companies through the following programs:

(a) Feasibility Studies Program

The program provides cost - sharing of up to 50% of the costs incurred by an investor or business to undertake studies leading to Manitoba industrial development. These may include areas such as market research, business plan development, productivity improvement and site location.

(b) Health Industry Development Initiative

The program's objective is to develop export products in the Health Care Sector. A number of financial and other forms of assistance are available to support research and development and new project start-ups.

(c) Manitoba Industrial Opportunities Program

The program is highly flexible and designed to attract new capital investment into Manitoba. The program can provide a variety of incentives which could include loan guarantees, interest subsidies, equity investment by way of taking a preferred or common position, land development, personnel development including training costs, provincial purchasing agreement and other forms of more direct financial assistance. Each agreement is negotiated separately and is tailor-made to meet each companies needs.

(d) Manufacturing Adaptation Program

The program's objective is to assist manufacturing and processing firms to adapt high technology to their operations. Through the introduction of state-of-the-art technology, firms will be able to increase productivity, quality, competitiveness and exports. The program offers two types of assistance: support for technology adaptation studies up to a maximum of $7,500 and 5 year loans up to a maximum of $100,000 based on 50% of eligible costs, for the purchase of high technology equipment.

(e) Technology Commercialization Program

The program supports industry in two areas:

1. New Business Assistance - This element of the program is designed to identify and support entrepreneurs or existing companies with innovative technological ideas. Financial support is available up to 50% of eligible expenses to a maximum of $10,000 in Phase 1, $20,000 in Phase 2 and $50,000 in Phase 3.

2. Technology Transfer - This element of the program is designed to facilitate the transfer of technological developments to industry. On application, financial support may be approved to help offset the costs incurred by Manitoba based companies in the acquisition of technologies. An objective of this element is to encourage Manitoba companies to broaden their technological base, enhance their commercial viability, and create jobs for Manitobans.

Trade Assistance Program

1. Trade Fairs (Solo) - provides cost sharing support for individual company participation in trade shows outside Manitoba.

2. Trade Fairs (Group) - organization and management of group participation by Manitoba firms in recognized domestic and international trade shows selected by Trade Branch.

3. Trade Missions (In - Coming/Out - Going) - provides support for sales missions to identified export markets and visits of foreign buyers to Manitoba.

Marketing Plan Program

Cost sharing assistance for product market analysis, export package design, labelling and sales promotion material.

Consulting Assistance

Trade Branch officers provide extensive consulting assistance to Manitoba firms. These services include identification of new markets, export market planning, pricing, tariffs, shipping, documentation, etc.

Export Education and Information

The Trade Branch sponsors seminars to highlight market opportunities or to upgrade export skills. Additionally, the Department's Business Library has an extensive international trade section which is readily available to the export community.

INDUSTRIAL INFRASTRUCTURE SUPPORT

Manitoba has the largest and most diversified manufacturing sector in Western Canada. About 1,300 establishments are engaged in manufacturing. In 1991 they employed 53,000 people and produced goods valued at approximately $6.2 billion.

Manitoba has dozens of thriving high technology ventures, large and small, in industries such as aerospace, electronics, telecommunications and electrical. These diversified manufacturers serve international markets and foster the growth of sophisticated support services.

- AEROSPACE

  The total capability of this industry is extensive, including design, development, manufacture and service of aerospace equipment, components and accessories. There are currently four major companies employing over 3,500 aerospace workers plus a growing number of smaller sub - contractors to the aerospace industry in Manitoba.

- ELECTRONICS

  Research and development, design, productivity and quality have resulted in 2,200 jobs and over $360 million in sales in Manitoba's ninety electronics companies and software developers. State-of-the-art products include telecommunication systems, defence equipment, computer peripherals, micro-computers, software products, medical-electronic equipment and special purpose instruments.

- METAL FABRICATION

  The metals fabricating industry produced factory shipments of $423 million in 1990. Of this total activity, an ever increasing number of companies are engaged in high precision fabrication of products in exotic metals utilizing the latest in C.N.C. machinery and equipment.

POTENTIAL MANITOBA SUPPLIERS

There are many Manitoba firms that have the skills and capabilities to act as suppliers of high tolerance sub - components. Many of these companies are currently supplying products to offshore customers on time and at competitive prices.

The Manitoba government is prepared to work along with your company and potential sub - contractors to devise and implement training support programs and other upgrading programs if necessary to ensure the superior performance by local suppliers.

TRANSPORTATION

RAIL

Winnipeg is centrally located on the main lines of both the Canadian National Railway (CNR) and the Canadian Pacific Railway (CP Rail) and all rail traffic between eastern and western Canada must pass through Winnipeg. Winnipeg is also the only major city between Vancouver and Thunder Bay with direct U.S. rail connections.

Both CNR and CPR maintain extensive marshalling yards with major service facilities. CNR's Symington Yards has a standing capacity of over 7,000 cars and can sort and dispatch 6,000 cars per day. CPR's rail yard has a standing capacity of 14,000 cars with continuous interswitching and is capable of switching and sorting 5,000 cars per day.

With three rail connections to the U.S., Winnipeg enjoys ready access to the world's largest market.

Service to the United States is provided by CN and CP together with their U.S.A. "family" lines as well as the Burlington Northern from Winnipeg.

The Canadian National, with its U.S. rail division, the Grand Trunk Corporation and the Duluth Winnipeg and Pacific is the largest railroad system in North America. CNGT has some 35,000 miles of track servicing 17 states in the U.S. industrial core and stretches coast-to-coast in Canada, with direct service to the extreme northern regions of Canada.

CN connects to the Port of Duluth, Minnesota. CN Rail also serves the Port of Churchill, Manitoba.

CP Rail provides coast to coast service in Canada, and through its family line, the Soo Line R.R. provides extensive service to the United States.

Burlington Northern Railways, with direct connections to almost one-half of the United States, has terminal facilities in Winnipeg complete with "piggyback" services.

Manitoba is fully served by Canada's intermodal rail systems - Canadian National Railway and CP Rail. Intermodal, which includes containers on flat cars as well as trailers on flat cars provides efficient and flexible service on domestic and international traffic, including import and export. The Burlington Northern also provides intermodal service to all points served in the U.S.A.

TRANSPORTATION: VARIOUS MODES
TIME IN TRANSIT FROM WINNIPEG

From Winnipeg	Truckload	Less-Than Truckload	Rail Carload	Inter-Modal (Piggy Back) Van Trailer	AIR
	MODE OF TRANSPORT				
TO:	Day(s)	Day(s)	Day(s)	Day(s)	Hours
Vancouver	3	3	2 1/2	3	3
Toronto	3	3	2	2	2 1/4
Montreal	3	3	2	3	3 1/4
Halifax	6	6	3 1/2	7	5
Portland, OR	3	4	3 1/2	7	4 3/4
Los Angeles, CA	5	6	6	10	6
Kansas City, KA	2	3	2 1/2	6	3 1/4
Houston, TX	3	4	4	8	5 1/2
Denver, CO	2	3	2 1/2	5	4
Minneapolis, MN	1	2	1	3	1 1/2
Chicago, IL	2	3	2	7	2
Cincinnati, OH	2	3	2 1/2	5	4
Pittsburgh, PA	2	3	3	7	3
Boston, MA	3	4	3	10	5
New York, NY	3	4	3	8	4 1/4
Miami, FL	5	6	5	10	6

NAMES OF CARRIERS PROVIDING INFORMATION

Truckload - Canada - Reimer
- U.S.A. - Penner International

Less Than Truckload - Canada - Reimer
- U.S.A. - Penner International

Rail Carload - Canadian National Railways (with Burlington Northern Railway)

Intermodal - Canada - C.N. Intermodal
- U.S.A. - SUNAC International

Air - Obtained from the Official Airline Guide

MOTOR CARRIERS

Manitoba maintains an important and prominent position as a transportation centre with nine of the thirteen largest interprovincial trucking firms being headquartered in Manitoba.

*Arnold Bros. Transport Ltd.
*Atomic Interprovincial Transportation Systems
*Pauls Hauling Ltd.
*Motorways - Direct
*Kleysen Transport Ltd.
*Imperial Roadways Inc.
*Penner International Ltd.
*Trans - X Ltd.
*Reimer Express Lines Ltd.
Day and Ross Inc.
Trimac
CP Express and Transport
TNT Canada Ltd.

* Headquartered in Manitoba

In addition, Winnipeg is the corporate headquarters of Federal Industries Ltd., the largest highway transportation company in Canada and the seventh largest in North America.

Manitoba's central location permits fast and efficient highway transportation to all points in North America. Traffic moving east and south is often classified as return haul traffic and frequently receives reduced rates.

In addition to excellent service by highway carriers, the CPR, CNR and the Burlington Northern Railway all operate intermodal terminals in Winnipeg. This combines the economies of rail transport with the delivery flexibility of highway transport.

Shipping Distances from Winnipeg to Selected Canadian and U.S. Centres

CANADA	MILES	KILOMETRES
Regina, Saskatchewan	355	571
Thunder Bay, Ontario	444	715
Saskatoon, Saskatchewan	515	829
Calgary, Alberta	835	1,344
Edmonton, Alberta	840	1,352
Windsor, Ontario	1,184	1,905
Kelowna, British Columbia	1,205	1,939
Toronto, Ontario	1,305	2,099
Vancouver. British Columbia	1,387	2,232
Victoria, British Columbia	1,452	2,337
Montreal, Quebec	1,496	2,408
Quebec City, Quebec	1,664	2,678
Moncton, New Brunswick	2,132	3,431
Charlottetown, PEI	2,241	3,607
Halifax, Nova Scotia	2,272	3,656
St. John's, Newfoundland	3,006	4,838
UNITED STATES		
Minneapolis, Minnesota	456	734
Rapid City, Michigan	678	1,091
Des Moines, Iowa	699	1,125
Billings, Montana	814	1,310
Kansas City, Missouri	829	1,334
Chicago, Illinois	862	1,387
St. Louis, Missouri	1,058	1,702
Denver, Colorado	1,068	1,718
Columbus, Ohio	1,168	1,879
Salt Lake City, Utah	1,292	2,079
Dallas, Texas	1,308	2,105
Portland, Oregon	1,533	2,467
Atlanta, Georgia	1,575	2,534
New York City, New York	1,660	2,671
New Orleans, Louisiana	1,675	2,695
Phoenix, Arizona	1,909	3,072
Los Angeles, California	1,996	3,212

Source: Manitoba Department of Highways & Transportation

AIR TRANSPORTATION

The Winnipeg International Airport's close proximity (15-20 minutes) to the business district of downtown Winnipeg gives it a distinct advantage over other international airports in Canada. With its three paved runways, state of the art navigation systems, newly completed $100 million renovations, modifications and expansion of its Air Terminal Building and Area Control Centre, Winnipeg is well equipped to handle aircraft and passengers far in excess of what it is currently handling. Winnipeg's generally favourable weather ensures that the airport is usable 99% of the time, on a annual basis.

Winnipeg International Airport is one of the few major North American airports which operates 24 hours a day.

Winnipeg currently receives scheduled air services from Air Canada, Canadian Airlines International Ltd., Northwest Airlines, Northwest Territorial, Ontario Express, Air Ontario, Calm Air, Perimeter and Air Manitoba. In addition to offering air services to the North, South, East, and West, the Winnipeg International Airport is open 24 hours a day (no restrictions) and does not suffer from the airport congestion problems which currently plague some larger international airports.

In 1989, total passenger volumes exceeded 2.3 million.

Cargo handling is also a major activity at the Winnipeg International Airport. All airlines serving Winnipeg handle cargo shipments into and out of Winnipeg on an "other cargo" basis while Air Canada and Northwest Airlines also handle full cargo containers. The airport is also served by two full transcontinental cargo operations, one being Canadian Airlines International, the other Air Canada.

Freight handling facilities at the airport currently consist of the Air Canada Cargo building of 10,405 square meters and the International Aviation Terminal Building of 7,618 square meters.

FREQUENCY OF SCHEDULED PASSENGER FLIGHTS TO REPRESENTATIVE DESTINATIONS

Number of Flights Per Week as of June, 1991

FROM WINNIPEG TO:	Non - Stop Flights	Direct Flights
CANADA		
Calgary	33	31
Edmonton	13	19
Halifax	-	3
Montreal	-	19
Ottawa	19	11
Regina	39	-
Saskatoon	40	11
Sault Ste. Marie	-	11
Sioux Lookout	-	12
Sudbury	-	6
Thunder Bay	41	6
Toronto	86	-
Vancouver	28	47
UNITED STATES		
Chicago	7	-
Minneapolis	21	-

Non-Stop - No stop(s) enroute
Direct Flight - Stop(s) enroute - No change of Aircraft.

Source: Official Airline Guide, North American Edition

GOVERNMENT REGULATIONS

This section of the report addresses the main government regulations facing your company in Manitoba. It addresses the following matters:

1. Labour Legislation (this section is set out in a comparative manner with other provinces).
2. Environment (Manitoba's environment legislation is typical of all Western Canadian provinces).
3. Workplace Safety and Health (highlights are given).
4. Taxation (Although this is a complex subject we have attempted to present it in a straightforward and comparative manner).
5. Workers Compensation (rates are given).
6. Canada Pension Plan (a federal program - rates are given).
7. Unemployment Insurance (a federal program - rates are given).
8. City of Winnipeg taxes (rates).

* A detailed copy of the relevant statutes covering government regulations is available on request.

The data provided is the most current at the time of printing. We suggest that specific enquiries be directed to the departments concerned.

1. LABOUR LEGISLATION

Manitoba's labour legislation is contained in a series of acts:

EMPLOYMENT STANDARDS ACT
VACATIONS WITH PAY ACT
PAYMENT OF WAGES ACT
LABOUR RELATIONS ACT

The following highlights the most significant points for each of the Acts.

Employment Standards Act

The standard hours of work for an employee is eight hours per day and forty hours per week. Exceptions to these hours are possible by order from the Manitoba Labour Board or where applicable through collective agreements. Employees are entitled to overtime when they work more than the standard hours.

The standard overtime rate in Manitoba is one and one half times the regular rate of pay.
The minimum wage for hourly employees, is $5.00 per hour effective March 1, 1991.

There are seven paid general holidays in a year. These are New Year's Day, Good Friday, Victoria Day, Dominion Day, Labour Day, Thanksgiving Day and Christmas Day. Employees who qualify to be paid for the general holiday and work on that day, must be paid at the regular rate of pay for that day, and, in addition to that, one and one half times the regular rate of pay for all hours worked on the general holiday. Notwithstanding the foregoing a person employed in a continuously operating plant is not entitled to receive pay for working or being on duty on a general holiday if, in lieu thereof, he receives equivalent compensatory time off within thirty days or, by agreement, on a date more than thirty days after the general holiday.

Policies respecting termination of employment can be established through the employer confirming the existence of a practice. Except in the case of the foregoing, or where there is just cause of termination, the length of notice must be, at least, equal to one pay period.

Vacations With Pay Act

If employees have worked a year for one employer and have put in 95% of the regular working time, they have the right to a vacation of two weeks with regular pay. Employees who have not worked for 95% of the regular working hours do not have the right to vacation time off. However, they are entitled to vacation pay that is 4% of regular earnings for that year, excluding overtime.

Employees who have worked for the same employer for at least 50% of the regular working hours in each of 4 years in the preceding 10 years, may have a right to three weeks vacation with pay subsequent to the fourth year. If these requirements are not met, the employee does not have the right to 3 weeks off, but still has the right to vacation pay equal to 6% of total regular earnings, provided the 5th year is completed and all other requirements are met.

Payment of Wages Act

Employers are required to pay wages at least as often as semi-monthly to each employee. Wages are to be paid within 5 working days after the expiration of each pay period or within 5 days of termination of employment, if applicable. Alternative arrangements can be made through a collective agreement or an order of the Minister as a result of an application.

Labour Relations Act

The Labour Relations Act deals with employee union-employer relations. Most of the provisions in this Act are based on legislation in force in other jurisdictions.

The Manitoba Labour Board is maintained as the specialist tribunal responsible for fair and efficient administration and adjudication of matters respecting labour relations. The board is tripartite in nature with a full time chairperson, two part-time vice-chairpersons, and an equal number of management and union representatives. The Board's remedial powers to deal with unfair labour practice cases are very similar to powers found in the Ontario Act.

Secret ballot strike votes are required as a precondition to a lawful strike. Strike votes are not required in Ontario. Employers can hire temporary workers during a work stoppage unlike Quebec which does not allow the replacement of workers.

Manitoba's and Ontario's Acts provide employees with a recurring opportunity to change their minds about their decision to unionize, or their choice of a particular union.

Manitoba together with the Canadian jurisdictions of B.C., Ontario and Quebec have first contract legislation. The significance of the first contract provisions is in promoting voluntary agreements by the parties involved. Most newly certified unions and employers have continued to reach their own agreements without any resort to the first contract provisions.

A union may apply to be certified on the basis of signed membership cards and the Labour Relations Board will determine whether the union can be certified primarily by counting membership cards to determine the level of support. This is used in almost all jurisdictions in Canada. Only Nova Scotia orders votes in every case.

2. ENVIRONMENT LEGISLATION

The Province of Manitoba has adopted guidelines with regard to emissions that are generally in line with those of the EPA in the United States, and the Canadian Government Department, Environment Canada.

A business locating in the Province which will or may result in the discharge of contaminant into the environment must submit a proposal to the Environmental Control Branch of the Manitoba Government. Assistance in developing an acceptable proposal is available on request.

The Minister responsible for environment may approve the proposal or refer it to the Manitoba Clean Environment Commission for a public hearing and a report from the Commission with recommendations prior to licensing. Variations to guidelines may be recommended by the Commission after a hearing, including those stated in a proponents proposal, where no regulation exists prescribing limits, terms and conditions.

3. MANITOBA'S WORKPLACE SAFETY AND HEALTH ACT

The general purpose of the Workplace Safety and Health Act is to protect workers and self-employed persons from risks out of, or in connection with, activities in the workplace. In addition, the objective is to protect other persons from risks to their safety arising out of activities in the workplace.

The general duties of employers and workers, under the Act, are summarized in the following tabulation:

GENERAL DUTIES OF EMPLOYERS AND WORKERS

(a) **General Health and Safety**

Employers: Ensure safety and health of workers as far as reasonably practicable. Ensure other workers protected from safety and health hazards while in the workplace as far as reasonably practicable.

Workers: Take reasonable care to protect his/her safety and health and that of any other person who might be affected by his/her act or omissions.

(b) **Safe Workplace Equipment**

Employers: Provide, maintain safe and healthy workplace, tools, necessary equipment and systems as far as reasonably practicable.

Workers: Use or wear protective devices, clothing, equipment as required by nature of work and as provided by employer and/or required under Regulations.

(c) **Information Training**

Employers: Provide workers with information, instruction training and supervision necessary to ensure safety and health as far as reasonably practicable.

Acquaint workers, especially supervision, with information about potential safety and health hazards or work.

Provide paid leave for committee members or representatives to attend training.

(d) **Compliance**

Employers: Comply with provisions of Act and Regulations.

Provide written report of compliance with an improvement order to Safety and Health Officer as well as to safety and health committee or representative.

Workers: Comply with Act and Regulations.

(e) **Co-operation**

Employers: Consult and co-operate with safety and health committees or representatives as applicable in the carrying out of their duties, rights and responsibilities under the Act.

Co-operate with any persons while they are carrying out duties under the Act or Regulations (e.g. Safety and Health Officer).

Workers: The same duties apply to workers

(f) **Committees, Representatives**

Employers: Establish safety and health committees or representatives as required under Act.

(g) **Discriminatory Action**

Employers: Not to take discriminatory action against workers because they are exercising a right or a duty under the Act or for giving evidence or for providing information regarding safety and health in the workplace.

(h) **Unusually Dangerous Work**

Employers: Not to require or allow workers to do work which involves unusually dangerous conditions which the employer is aware of or should be aware of.

Notes

1. This duty applies to a union or any other person acting on behalf of an employer as well.
2. This applies to an agent of the employer or people acting in a supervisory capacity at the workplace as well.

The Workplace Safety and Health Division is responsible for the administration and enforcement of the Act. Administration includes the setting of standards through regulations and codes of practice as well as the provision of information and education concerning safety and health issues. Enforcement is achieved through the powers granted to Division Officers to inspect the workplace and to make Orders e.g. improvement as well as through the Act's provisions for offenses and prosecutions.

4. TAXATION

CORPORATE INCOME TAX

Corporations are essentially liable for three levies at the provincial level in Manitoba. These are represented by corporate income tax where the effective rate is currently 17%, a corporation capital tax, predicated on the paid up capital, at a rate of 0.5% and a health and post-secondary education levy of 2.25% of the payroll.

Corporate income taxes payable in Manitoba are a function of taxable income as defined by the federal regulations.

A brief summary of the current status is therefore warranted. The current federal basic rate of corporate tax on manufacturing income is 25%. Accelerated capital cost allowance of up to 50% are applicable in calculating taxable income. In addition, a 3% surtax is in effect.

Percentage Effective Rate

	July,1 1989	July,1 1990	July,1 1991 and subsequent years
Manufacturing Income	25	24	23
Surtax on all Corporations	3	3	3

Qualified scientific research and development expenditures undertaken in Manitoba, are eligible for a 20% federal investment tax credit.

Corporate taxes payable in Manitoba are 17% of federal taxable income for large corporations and 10% for small corporations.

Sales Taxes

(a) Federal

The federal government applies the Goods and Services of 7% on most goods and services. This tax is a value - added tax similar to those of Europe, Japan and New Zealand. A value - added tax refunds all sales tax paid by producers on their inputs.

(b) Provincial

The Manitoba government imposes a 7% tax on all retail sales. This tax is collected once from the ultimate consumer. Sales made outside of Manitoba are exempt from this tax. No sales tax is applicable on materials used in the manufacture of goods for sale.

Production machinery and equipment in a plant incurs the Manitoba provincial sales tax.

Corporate Capital Tax

The basic rate of corporate capital tax, payable in Manitoba, is 0.3% of the paid up capital of the corporation at the close of its fiscal year with a 0.2% surcharge being imposed on corporations with paid-up capital in excess of $10 million. Corporations with paid-up capital of less than $1 Million are exempt.

Health and Post Secondary Education Levy

Manitoba imposes a Levy for Health and Post-secondary Education on salaries and wages. The effective rate collected from employers with payrolls over $1.2 million, is 2.25% of the payroll.

PERSONAL INCOME TAX

The following table shows the 1991 personal federal income tax rates.

1991 Federal Income Tax Rates
Based on 1991 Figures

Taxable Income	Tax
$ 28,784 or less	17%
$ 28,784 to 57,569	$4,893 + 26% on next 28,784
$ 57,569 or more	$12,377 + 29% on remainder

The federal government also imposes a 5% net federal surtax and an additional 5% high income surtax on all federal tax in excess of $12,500.
Manitoba imposes a 52% rate calculated as a percentage of a federal taxes payable. A net income tax of 2% is levied with an offset being provided based on income and family circumstances. A high surtax or an additional 2% of net income is applied to net income over $30,000 (for a single tax filer).

* An inter - provincial comparison of major levies and budget changes follows.

PAYROLL TAX REFUND FOR EMPLOYEE TRAINING

The payroll tax refund for employee training is implemented in conjunction with the WORKFORCE 2000 Plan. The payroll tax credit is to be in the form of a refund to eligible employers of a portion of payroll taxes paid.

Effective 1991, Manitoba private sector employers engaged in goods-producing industries will qualify for a refund of up to 0.3% of their payroll, to a maximum of $100,000 for workplace training costs related to improving the generic skills of their employees. In order to encourage businesses to increase their investment and involvement in training, while at the same time recognizing that employers have the primary responsibility to develop a skilled and competitive workforce, the Payroll Tax Refund will be structured as follows:

- for the first $20,000 of eligible training costs, the refund will be 75% of these costs;
- for eligible training costs in excess of $20,000, the refund will be 50% of these costs.

The maximum refund will be the lesser of $100,000 or 0.3% of payroll. Under no circumstances will the refund exceed the amount of Payroll Tax paid.

Employers will continue to pay the Payroll Tax at the same rate as previously required. Those wishing to receive the Payroll Tax Refund will be required to identify workplace training activities in accordance with the eligibility criteria set out by Manitoba Education and Training, and submit an Application for Workplace Training Plan Approval.

All enquiries regarding Eligibility Criteria and/or Application for Workplace Training Plan Approval should be directed to: WORKFORCE 2000, Manitoba Education and Training, 1010 - 401 York Avenue, Winnipeg, Manitoba REC OP8 Telephone: (204) 945-2000.

Other enquiries should be directed to: Taxation Division, Manitoba Finance, 101 - 401 York Avenue, Winnipeg, Manitoba R3C 4G4 Telephone: (204) 945-6444

1991 INTER - PROVINCIAL COMPARISON OF MAJOR LEVIES

	NFLD.	P.E.I.	N.S.	N.B	QUE.	ONT.	MAN.	SASK.	ALTA.	B.C.	MANITOBA'S RANKING 1=HIGHEST
Personal Income Tax (% of Basic Federal Tax)	62.0	59.0(a)	59.5(a)	60.0(a)	*	53.0(a)	52.0(a)	50.0(a)	46.5(a)	51.5(a)	(6)
Corporate Income Tax (% of Taxable Income)(b)											
- Large	17.0	15.0	16.0	17.0	6.90	15.5	17.0	15.0	15.5	15.0	(1-2)
- Small	10.0	10.0	10.0	9.0	3.75	10.0	10.0	10.0	6.0	9.0	(1-6)
Sales Tax (%)	12.0	10.0	10.0	11.0	8.0	8.0	7.0	7.0	-	6.0	(7-8)
Gasoline (c/l.)	13.70(c)	12.30	13.70	12.70	16.7	13.0	10.5	10.0(d)	9.0	10.74(c)	(7)
Diesel Fuel(c/l.)	15.6	12.40	16.2	13.70	15.0	12.6	10.9	10.0(d)	9.0	11.18	(7)
Tobacco Tax (c/cig.)	6.78(e)	9.0	6.8(e)	9.36(e)	5.76	6.5(e)	6.0(e)	6.68(e)	7.0	6.00	(3-4)
Captal Tax(%)	-	-	-	-	-	0.52	0.3	0.3(f)	0.5(f)	-	(3-4)
- Banks (%)	3.0	3.0	3.0	3.0	1.04	1.0	3.0	3.0	2.0	2.0	(1-6)
- Trust and Loan Companies (%)	3.0	3.0	3.0	3.0	1.04	1.0	3.0	3.0	2.0	2.0	(1-6)
Employer Payroll Tax (%)	1.5	-	-	-	3.45	1.95	2.25	-	-	-	(2)
Health/Medicare Premiums ($ per year)											
- Single Person	-	-	-	-	-	-	-	-	312.0	420.0	(3-10)
- Married Couple	-	-	-	-	-	-	-	-	624.0	744.0	(3-10)
- Family of 3 or More	-	-	-	-	-	-	-	-	840.0	624.0	(3-10)
Accident, life and sickness insurance premiums (%)	4.0	2 .0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	(3-10)

* The Quebec personal income tax is levied directly against taxable income.

(a) These provinces impose surtaxes on higher income taxpayers. Saskatchewan and Manitoba levy a 2.0% flat tax on "net income." Alberta levies a 0.5% tax on "taxable income."
(b) The rates shown are the general rates. Some provinces apply special rates to certain types of business income.
(c) Gasoline sold in the Grater Vancouver area is also subject to a 3.0 cent/l. transit levy.
(d) Saskatchewan residents may claim a full rebate each spring for fuel tax paid to full amount of receipts.
(e) These provinces also apply sales taxes to tobacco products.
(f) Manitoba imposes a 0.2% surcharge on taxable paid-up capital in excess of $10 million. Saskatchewan applies a 2% surcharge on specified resource sales of large corporations.

5. WORKERS COMPENSATION

All employers are required to pay premiums to a compulsory provincial fund (Accident Fund) according to the level of hazard in their industrial sector. The provincial rates of assessment are fixed by the Workers Compensation Board of Manitoba. The maximum assessable earnings of each worker for l991 is $38,000.

Compensation claims are reviewed and benefit entitlements are awarded accordingly. Loss of earnings are compensated to a level of 75% of average gross earnings at the time of the accident. The maximum amount payable is $28,500 which is 75% of the $38,000 maximum. Benefits continue as long as there is a disability due to the work related accident or sickness.

6. CANADA PENSION PLAN

All employees are required to contribute to the Canada Pension Plan which requires a matching contribution from the employer. There is a basic exemption and minimum level of pensionable earnings. Deductions and employer contributions are remitted to the government monthly. The detailed information is presented in the following table for 1989.

Year's Maximum Pensionable Earnings	$ 27,700.00
Year's Basic Exemption	2,700.00
Maximum Earnings on Which Contributions are Based	25,000.00
Maximum Employee Contribution (l.8% of $23,300)	525.00
Maximum Employer Contribution	525.00

7. UNEMPLOYMENT INSURANCE

All employees and employers are required to pay federal unemployment insurance premiums based on earnings to a maximum insurable earnings level, subject to meeting minimum earnings levels. Deductions are made from each pay cheque at the prescribed rate. Deductions and employee contributions are remitted to the federal government on a monthly basis.

Employees earnings have to be insured when one of the following two criteria is met. These are cash earnings of $121.00 or more per week or work 15 hours or more in a week.

Yearly Maximum Insurable Earnings	$ 31,460.00
Maximum Employee Contribution @ 1.95%	613.60
Maximum Employer Contribution @ 1.4%	859.04

It should be noted that an employers premium can be reduced where a wage-loss replacement program is maintained which would effectively reduce unemployment sickness benefits payable under certain circumstances.

8. BUSINESS REGULATIONS AND TAXES - CITY OF WINNIPEG

It is necessary to fulfil two requirements set out by the civic government.

Zoning Regulations

All businesses are required to conform to City zoning regulations.

Business Tax

The City business tax is a percentage (6%-20%) of the assessed annual rental fee of the property as determined by City Assessors. In essence this is the cost to occupy the premises and for a manufacturing operation the effective rate is 10%.

1991 INTERCITY COMPARISON OF ANNUAL PERSONAL COSTS AND TAXES
Family of Four at $40,000 Total Income

	Vancouver	Edmonton	Regina	**Winnipeg**	Toronto	Montreal	Halifax
Net Provincial Income Tax[1]	2,817	2,744	3,535	**3,195**	2,899	3,377	3,255
Property Tax[2]	1,860	1,811	1,657	**2,189**	2,203	2,115	1,438
Retail Sales Tax[3]	709	0	1,068	**947**	1,001	1,227	986
Gasoline Tax[4]	275	180	200	**210**	226	200	274
Health Premiums	744	624	0	0	0	0	0
Auto Insurance[5]	932	775	628	**659**	966	950	543
Levies	7,337	6,134	7,088	**7,200**	7,295	7,869	6,496
Home Heating[2]	410	450	560	**670**	570	980	1,070
Electricity[6]	534	553	604	**485**	723	509	772
Telephone[7]	195	146	125	**133**	174	162	198
Living Costs	1,139	1,149	1,289	**1,288**	1,467	1,651	2,040

(1) Income is sum of earnings and family allowance. The family consists of a taxfiler, dependent spouse, 2 children - 1 under age 6, 1 between 12 and 15. Non-refundable credits for CPP and UIC contributions are allowed. Family allowance is adjusted for Alberta and Quebec. Income taxes include surtaxes and are net of tax reductions, refundable sales tax credits/rebates. For Quebec, taxes are reduced by the value of federal tax abatement.

(2) Property tax and home heating are from CMHC Affordability Measure, January, 1991, which uses averages of starter homes in metropolitan

(3) Retail Sales Tax is based on expenditure patters in Statistics Canada's 1986 Family Expenditure Survey. Saskatchewan and Quebec have harmonized their Retail Sales Tax with the GST. Figures for Regina and Montreal include this adjustment.

(4) Gasoline Tax cost is based on the annual consumption of 2,000 litres of regular gasoline at April, 1991 rates.

(5) Auto insurance premiums are calculated for a male, above 25 years of age, driving a 1990 Chevrolet Cavalier. Coverage includes $500,000 third party liability, $250 collision deductible (Saskatchewan $200, British Columbia $300) and $50 comprehensive deductible (Manitoba $250) as at January, 1991.

(6) Electricity charges represent an annual bill for 9,000 kwh. Rates are as at April 1, 1991.

(7) Telephone charges are for the mail telephone in an individual residence as at January 10, 1991.

Source: The 1991 Manitoba Budget